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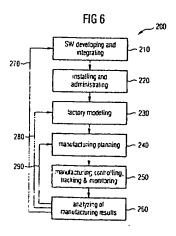
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## (54)Computer integrated manufacturing techniques

The present invention provides a novel distributed factory system framework including a novel factory automation lifecycle (200) having lifecycle activities for SW developing and integrating (210), installing and administrating (220), factory modeling (230), manufacturing planning (240), manufacturing controlling, monitoring and tracking (250) and analyzing of manufacturing results (260). The factory lifecycle comprises framework components. The distributed factory system framework also includes application components and SW building blocks. The framework components are adapted for managing the application components, while the application components are utilized to provide instructions for managing a process such as a wafer fab. The building blocks are adapted for forming or modifying framework and application components. The distributed factory system framework provides computer implemented

methods for integrating processing systems and facilitates process and equipment changes.





## **EUROPEAN SEARCH REPORT**

**Application Number** 

EP 00 11 5577

Category	Citation of document with indi-	cation, where appropriate,	Relevant	CLASSIFICATION OF THE	
Х	US 5 495 417 A (MIURA 27 February 1996 (199 * column 13, line 41	KAZUYKI ET AL) 06-02-27)	1,13,17, 19-24	APPLICATION (Int.CI.7)	
	* * column 39, line 60 figures 1-7,89-96 *				
	US 5 657 254 A (DUROS 12 August 1997 (1997- * column 4, line 66 - figures 1-4 *	08-12)	15		
				TECHNICAL FIELDS SEARCHED (bht.Ci.7)	
			-	G05B	
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		·			
TI	ne present search report has been d	rawn up for all claims			
Place of search MITALT CLI		Date of completion of the search	T	Examiner	
MUNICH  CATEGORY OF CITED DOCUMENTS  Description of the particularity relevant it taken alone particularity relevant it combined with another accument of the same category it technological background in non-writen disclosure		I : theory or principle ur E : earlier patent document after the filing date D : document clied in the	27 September 2001 Helot, H  I : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document clied in the application L : document cited for other reasons		

EPC FCRM (503 03.82 (POLCO))

## ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 00 11 5577

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27-09-2001

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 5495417	A	27-02-1996	JP JP JP JP JP JP JP JP	5266029 A 6110894 A 5216896 A 3140877 B2 6252236 A 3139867 B2 6260380 A 6176994 A 5694325 A 5151231 A	15-10-1993 22-04-1994 27-08-1993 05-03-2001 09-09-1994 05-03-2001 16-09-1994 24-06-1994 02-12-1997 18-06-1993
US 5657254	A	12-08-1997	US US CA CA US US	5508947 A 5220517 A 2050247 A1 2165847 A1 2194855 A1 5329463 A 5497316 A	16-04-1996 15-06-1993 01-03-1992 01-03-1992 01-03-1992 12-07-1994 05-03-1996

For more details about this annex : see Sticial Journal of the European Patent Office, No. 12/82

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